

## **REMARKS**

### **I. Status of the Claims**

Claims 2-11 and 13-16 are pending. Claims 3-11 have been withdrawn from consideration by the Examiner as being directed to non-elected subject matter.

Claim 2 has been amended to call for relaxing chromatin structure of chromosomes with a histone deacetylase inhibitor "in chicken-derived B cells in which gene conversion is occurring at the antibody locus to enhance gene conversion in said chicken-derived B cells." Claim 16 has been amended to call for "enhancing gene conversion at an antibody locus in chicken-derived B cells in which cells gene conversion is occurring at said antibody locus by relaxing with a histone deacetylase inhibitor the chromatin structure of chromosomes in said chicken-derived B cells, whereby diverse immunocytes are obtained." Support for "gene conversion" as recited in the claims is found in the specification at, for example, Embodiment 2 that is found on pages and the results reported in Figure 3(a). Additional amendments to claim 2 are made to more clearly define the claimed subject matter, but are not believed to change the scope of claim 2.

Claims 6 and 7 have been amended to depend from claim 2.

By this Amendment, no new matter has been added to the application.

### **II. Response to Rejections**

#### *(i) Rejections Under 35 U.S.C. §103*

Claims 2 and 15 stand rejected as allegedly obvious over Sonoda, et al., 2001, Phil. Trans. R. Soc. London, 2001, 356:111-117 ("Sonoda") in view of McMurry et al., 2000, Science 287:495-498 ("McMurry") and further in view of Watson et al., 2001, Recombinant DNA, pp. 297-304 ("Watson"). Claims 13 and 14 stand rejected as allegedly obvious over Sonoda in view of McMurry, Watson, and Choy et al., Mol. Cell. Biol. 2002, 22:8215-8225. Claim 16 stands rejected

as allegedly obvious over Sonoda in view of McMurry, Watson, and Sale et al., U.S. Patent No. 7,122,339 ("Sale").

The Examiner bases the rejections, at least in part, on the proposition that the phrase "homologous recombination at an antibody locus" may be "reasonably interpreted as V(D)J recombination." See Office Action at page 3. With reference to the rejection of claims 2 and 15, the Examiner states, "amending the claims to recite gene conversion, hypermutation, and switch recombination would overcome the obviousness of the rejection." *Id.* Before concluding the Office Action, the Examiner states, "For the purpose of a compact prosecution the ph[r]ase 'homologous recombination' has been interpreted as V(D)J recombination. Note that by amending the claims to recite gene conversion, hypermutation, and switch recombination, the obviousness rejection of claims 2 and 13-16 under 35 USC §103 would be overcome." Office Action at page 14.

Accordingly, in response to the rejections under section 103, in order to expedite prosecution and without conceding the validity of any rejection or the Examiner's stated basis for any rejection, independent claims 2 and 16 have been amended to recite gene conversion occurring at an antibody locus. The Examiner has stated that amending the claims to recite gene conversion, hypermutation, and switch recombination would overcome all rejections under section 103. It is respectfully submitted that, based on the Examiner's comments, amending the claims to recite gene conversion alone likewise overcomes all rejections under section 103. Accordingly, all obviousness rejections are believed to have been addressed and overcome. Reconsideration of claims 2 and 13-16 and withdrawal of all obviousness rejections is requested.

*(ii) Rejections Under 35 U.S.C. §112, second paragraph.*

Claims 2 and 13-16 have been rejected for alleged indefiniteness. The Examiner asserts that the meaning of the phrase "enhancing DNA homologous recombination at an antibody locus" is unclear and that the metes and bounds of the claim as a whole are thus unclear. See Office Action at page 14.

In response, without conceding the validity of the rejection, the claims have been amended to recite “relaxing with a histone deacetylase inhibitor the chromatin structure of chromosomes in chicken-derived B cells in which gene conversion is occurring at the antibody locus to enhance gene conversion in said chicken-derived B cells” (*see* claim 2) or “enhancing gene conversion at an antibody locus in chicken-derived B cells in which cells gene conversion is occurring at said antibody locus by relaxing with a histone deacetylase inhibitor the chromatin structure of chromosomes in said chicken-derived B cells, whereby diverse immunocytes are obtained” (*see* claim 16).

The phrase “enhancing DNA homologous recombination at an antibody locus” no longer appears in the claims. The meaning of “enhancing gene conversion at an antibody locus” is clear to one of ordinary skill in the art and the metes and bounds of the claim are clear. The basis of the rejection is thus believed to have been addressed and overcome. Reconsideration of claims 2 and 13-16 and withdrawal of the rejection under section 112, second paragraph is requested.

### **III. Conclusion**

The application is believed to be in condition for allowance which is earnestly solicited.

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